CONSUMPTION:

5.

WHAT IT IS, AND WHAT IT IS NOT:

ITS CAUSATION AND ITS REMEDIABILITY:

A LECTURE.

BY

JOHN C. FERGUSON, A.M., M.B., T.C.D.,

HONORARY FELLOW, KING AND QUEEN'S COLLEGE OF PHYSICIANS; QUONDAM PROFESSOR OF PHYSIC, SCHOOL OF PHYSIC IN IRELAND, AND PHYSICIAN TO DUN'S AND SIMSON'S HOSPITALS; PROFESSOR OF PRACTICE OF MEDICINE, QUEEN'S COLLEGE, BELFAST; PHYSICIAN TO THE GENERAL HOSPITAL; EX-PRESIDENT OF THE PATHOLOGICAL SOCIETY, ETC, ETC.

BELFAST:

HENRY GREER, BOOKSELLER, HIGH STREET.

1856.

PRINTED AT "THE BELFAST DAILY MERCURY" OFFICE.

The following Lecture, delivered in the Museum of the Pathological Society, was originally intended exclusively for the Medical Class of the Belfast School. The subject of it, however, having, from circumstances, excited a good deal of public attention, it has, in compliance with the strongly expressed desires of friends, as well non-professional as professional, been cheerfully handed over to the Treasurer of the General Hospital, for publication, by

THE AUTHOR.

Howard Street, February 19, 1856.

CONSUMPTION: A LECTURE.

"Consumption!—terrible, insatiable tyrant!—who can arrest thy progress or number thy victims? Why dost thou attack, almost exclusively, the fairest and loveliest of our species? Why select blooming and beautiful youth, instead of haggard and exhausted age? Why strike down those who are bounding blithely from the starting-post of life, rather than the decrepit beings tottering towards its goal? By what infernal subtlety hast thou contrived hitherto to baffle the profoundest skill of science, to frustrate utterly the uses of experience and disclose thyself only when thou hast irretrievably secured thy victim and thy fangs are crimsoned with its blood? Destroying angel! why art thou commissioned thus to smite down the first-born of agonised humanity? What are the strange purposes of Providence, that thus letteth thee loose upon the objects of its infinite goodness?"

Which of us, Gentlemen, that has ever read "The Diary of a late Physician," has not felt the touching force of this appeal from one who, though he knew not medicine, yet must have deeply studied the inmost workings of the human mind, and who has, with such pathos and truth, so graphically painted the scenes—

"Where hopeless anguish pours her groan,
And lonely want retires to die"?

Is there a physician who has not felt within him a burning desire to have these momentous, pithy questions even partially answered? *This* has been among the aspirations of the most benevolent and philanthropic of mankind; and I would plead it, among other impulses, as *my* apology for thus obtruding myself upon you.

Mid "all the ills that flesh is heir to," few diseases have aroused the apprehensions, and none forced itself upon the anxious consideration of every Briton, more than Phthisis. Studied, whether as a curiosity or as a mystery, the fact of its involving not only the safety of individuals, but the welfare of nations, must secure to it a deep interest in at least every medical mind. Do we not every day behold its withering blight alike invade the lowly hovel of poverty and the gaudy palace of wealth?

"Æquo pulsat pede pauperum tabernas regumque turres."

Do we not see the abode of temperance and every virtue held but a little, if at all, more sacred than the den of excess and every vice? Childhood and youth bend and fall under its withering grasp, and full-blown manhood succumbs to its ruthful influence. How oft do we see it revel in the arms of beauty and luxuriate with undiscriminating wantonness amid the fairest and most heavenly-gifted of our species? A monster, in truth, of savage propensities; whom to analyse and study, in every shade of his minutest habitude—to unravel the mysteries of his mechannism, and to unfold, as far as may be permitted to us, the secrets of his constitution, his nature, his origin, and the best means to prevent or repel his assaults—must be a desideratum to every philanthropic mind; and every attempt at its execution, undertaken and prosecuted in a spirit of true philosophy, should be hailed by all with encouragement and approbation. I shall, therefore, offer no apology, though some may deem one due, for the present attempt to lay before you in as clear and intelligible a form as I can, a summary of what medical science recognises as true in point of fact, or as held to be most probable by the most eminent in our profession on the all-important subjects of what consumption is—what it is not—its causation—and its remediability.

Some may ask, and naturally, have you any new fact, any new theory to propound? to which I unhesitatingly reply—none. But I regret being forced to confess my suspicion, that what is known on these matters might be far more widely known; and that students, for whom my present remarks are more especially intended, have not as accurate and clear notions on these points as is desirable. Disclaiming, then, originality in the views I am about to submit to you, I purpose, without acknowledgment of the authority whence the facts or the opinions may be drawn, to lay before you, as briefly as I may, the present state of our knowledge on these most important and vital points. And first, it may be well for us to determine what "consumption is *not*." Up to a comparatively late period not only many visceral disorganizations but even functional derangements were named and enumerated as forms or varieties of phthisis. These have now all given way to one single and individual lesion, and we no longer

regard as consumption any malady but *tubercle of the lung.* This, then, and none other, does medicine recognise as constituting phthisis. Above all, she protests against that system which mistakes symptoms for disease—that habit too oft indulged in, of seeing consumption in a few or even all the symptoms which usually attend it. It cannot, in my opinion, be too frequently or too emphatically enforced, that these may all be present, and no tubercle exist in the lung, and that all such cases are *not*, nor should they ever have been called, consumption.

What then is consumption? I have already said, tubercle developed in the lung—and solely to this disorganization of that important viscus do all modern authorities confine the term—and now what is tubercle? And I may here give expression to my regret at being obliged to admit that neither the microscope, nor chemical analysis from which much has been sought and more expected, has aided their votaries much in the solution of this question. Nor, in my mind, was it to be expected. The former may enlighten us, and does, on the peculiarities of its minute and ultimate structure. The latter may resolve it into its original and primitive elements, may demonstrate its composition to be of carbon—hydrogen—nitrogen—oxygen. But what have these to do with its vital properties? Have not other tissues and products of vital action a similar composition, and yet, are found to be quite innocuous to the animal economy? To aid chemical analysis, the altered products of respiration are appealed to, in support of the theory that tubercles are the residuum carbon, left from the inspiration of impure air, which theory, if I understand it aright, amounts to this:—all the oxygen of impure air inspired is insufficient to neutralise the amount of carbon offered to it in respiration:—the consequence is, carbon remains in the circulation; and this residuum of carbon is deposited in the lung:—then this carbon is said to be *tubercle.* I cannot see the force of this inference—especially when I know and reflect on the fact, that these very tubercles, whose identity no one questions, are found in every tissue and organ of the body, as well as in the lung; and when I recollect that we find in the lung's substance at every period of life, but particularly in old age, when tubercle is most rare, the well-known black pulmonary

matter, almost pure carbon, from which no inconvenience, much less danger, is ever apprehended. Why does this residuum not become tubercle?

But to return. On a reply to the query, what is tubercle, although long a vexed question, I think I may assert, an agreement has been generally arrived at and acceded to by the profession. Tubercles, then, are "peculiar morbid formations, the products of an altered secretion from, and impaired nutrition in, the parts containing them." From the minute capillary system of almost every tissue of the body, we see and acknowledge the elimination, the exudation, the secretion if you will, of various products, morbid and healthy; it is true, frequently associated with what we term inflammation, but not of necessity so. "Tubercle," says Audral, "is to be considered as the result of a modification, or perversion of secretion, which is often preceded by active sanguineous irritation or congestion." Why, then, should we doubt the capabilities of the *capillaries of the lung* to take on this morbid action, in circumstances favourable to its existence? Hereafter we shall consider what these circumstances are.

We find deposited in the lung's substance minute points of matter, in many of its physical properties closely resembling prepared starch; of a greyish blue or slate colour, gelatiniform, semi-transparent and viscid, which most pathologists regard as the first stage or original deposit of what in the course of time does and must go through the following changes. The matter first secreted or exuded has been described as assuming a variety of forms, under the designations of miliary tubercle, turbercular granulation, and tubercular infiltration. However, occur it as it may, all forms of it are admitted to undergo the same changes. In the semi-transparent mass, an opaque spot is observed to make its appearance: from this the opacity spreads, until the entire deposit becomes one homogeneous mass of an opaque, solid matter, in physical characters strongly resembling cheese. This constitutes the second stage of most pathologists, or crude tubercle. As time wears on, we find this solid body gradually softening down into a fluid of greater or less consistence, resembling, though differing from, *pus;* the softening, as some think, commencing at a central point, and thence spreading to the circumference.

The ulcerative process which attends this latter transition, assails adjoining tissues, implicating, of course, the bronchial tubes, through which the now fluid matter is expelled by expectoration, leaving behind cavities or vomicæ as they are termed, of size and extent commensurate with the size and number of the original crude masses. These ulcerous cavities usually proceed increasing in size from the coalition of a number becoming connected into one by the extension of ulceration. This it is that constitutes the third stage in the progress of tubercle, and is that condition in which portions of the lung of all consumptive patients are found when the disease has been of some standing. Now, most important questions arise—Does not the chief danger to the consumptive consist in the presence of these ulcerous cavities? And do they tend to cicatrize and heal? Both these questions may be now answered, I think, in the affirmative. It has been satisfactorily shown, that more healthy action being established in their parietes, these approximate, finally adhere and heal, closing the cavity, and leaving behind a peculiar cicatrix. If this process, begun and perfected by *nature* alone, were of more frequent occurrence, or if art could suggest means by which so desirable a result could be effectually promoted or obtained, then, indeed, would we have less reason to dread the destroyer, and recovery from phthisis need not be deemed, as it too justly is, so rare as to be all but hopeless.

I have thus attempted to show very briefly what consumption really is. And in again deprecating the practice of confounding, either in word or thought, the actual disease with the symptoms, which, at the best, are most deceptive evidence even of its existence, I would take this opportunity of stating, that notwithstanding all the aid that modern science, through physical signs, has conferred upon us, in the whole range of medical practice I believe there is no case more difficult to arrive at certainty of diagnosis in, than the earlier stages of phthisis. I know there be men in our profession, who need not the assistance, which their brethren gladly avail themselves of, afforded them by the signs derived from percussion and auscultation, and who boast their ability to pronounce, as it were, *ex cathedra*, on the presence or absence of consumption. May I be permitted to say, I doubt

the existence of this assumed, enviable astuteness, as I do the knowledge and candour of those who vaunt themselves on its possession. Show me the man who, from symptoms alone, unaided by his stethoscope, pronounces a lung to be the seat of tubercle in its first, second, or third stage; and without more ado, I set about instinctively drawing unfavourable conclusions, and quietly mutter to myself—"*Hunc tu Romane, caveto!*"

And now, secondly, as to the causation of tubercle. In the history of disease, few points are more deserving of being carefully considered than its *œtiology;* for we know in how many instances the removal or neutralization of an evident cause is alone necessary for the removal of its effect. This we have best illustrated where disease, as sometimes happens, is clearly referable to a single and uniformly operative cause. More frequently, however, it has been found not so easy a matter to establish this relation of cause and effect, from the generally admitted fact, that a concurrence of several influences is most frequently active, if not necessary to produce it; nor of this do I believe we could adduce a more marked instance than in the case under consideration. Most pathologists of the present day are inclined to admit the identity of what has been designated the scrofulous and tubercular constitution. This identity therefore we shall assume, and, in the endeavour to arrive at a knowledge of its causation, we find that the most approved authorities of past and present times have taken an active part. The causes of the tubercular diathesis have been variously arranged and viewed as hereditary or innate, and as acquired, predisposing, and exciting.

By the term *hereditary* is not meant that the offspring inherits, or is born with, the *disease* present in the parent, though this occasionally happens; but only that the peculiar constitution or diathesis, and with it the disposition to the same disease, are transmitted from parent to child. Nay, further: it is held, and I think correctly, that it is not alone the tuberculous diathesis in the parent which entails a similar morbid condition in the child, but that other diseases and disordered states of the system may be productive of a similar tendency: in fact, that deficient vital energy in the parent, proceeding from impaired general health, from local

disease, or even from age, is sufficient to produce in the offspring a state of *cachexia* that may originate the scrofulous constitution. Holding, as I do, that, in the present constitution of society, this subject should not be overlooked, I would offer a remark or two touching it. "*Senes et valitudinarii imbecilles filios vitiosa constitutione gignunt*," wrote a high authority of the sixteenth century—a truth, up to the present hour, of very general acceptation. It is not contended that they are *necessarily* weakly, much less scrofulous, but that they are too frequently of that weakly, debilitated frame of body, which all admit to be favourable to the occurrence of tubercle. In the same category may be placed parents who have been the victims of premature venereal excesses and self-indulgences. Closely connected with the foregoing is a cause, whose influence in entailing this, 'mid its other fearful effects, most observers have recognised—namely, that *cachexia* of the parent, proceeding from a syphilitic taint, or from mercurialization, or most frequently from *both*.

"Almost all the scrofulous cases at St. Louis," writes a modern eminent author, "are owing to a syphilitic infection transmitted hereditarily." And we all know, and will admit the difficulty—indeed impossibility—of separating the influence of the syphilitic taint from the effects of excessive and prolonged courses of mercury.

It has been generally, though not universally, held, that frequent and close intermarriages were followed by a weak and puny progeny—often, in after life, the victims of one or other form of scrofula. Here again, we recognise not the tuberculosis directly entailed, but the debility of constitution favourable to its occurrence.

Insufficient and unwholesome food, associated as it too frequently is with the abuse of spiritous liquors, predisposes the offspring to tubercle. To some it has appeared that certain articles of food too freely or exclusively indulged in by the parent, operate injuriously on the child. This has been held to be true of pork and bacon. Of this point, however, and some of a similar nature, we must freely admit that, "*adhuc sub judice lis est.*"

And now as to those causes which seem to predispose to, or actually produce, tubercle in the individual, we would briefly

allude to the most received and authorised opinions. I may state in general terms, that every circumstance that we recognise as capable of depressing vital power, whether in connexion with food, drink, climate, temperature, clothing, habits, &c., and which consequently favours the establishment of general cachexia, should be viewed, more or less, in the light of cause to tubercle as an effect. In Ireland we have long plumed ourselves on the valuable properties of our potato as human food. Others have thought *they* saw in *it* a fruitful source of tubercle. The very atmosphere of our "gem of the ocean," has been by some assigned as a cause, whilst others have equally pertinaciously held that our atmosphere, the sweet, pure air of our heaven, is not alone the only preventive of its occurrence, but when it *has* been developed, its only cure!

I deem it needless to dwell on the too frequent practice of parents, who, not satified with their own vicious indulgence, permit and cause their children to partake of their noxious beverages. Truly may it be said, that the vices of parents are not merely passively, but actively propagated to "the third and fourth generations."

An atmosphere contaminated by the exhalations from sewers, cess-pools, and water-closets, insufficiently drained, or that has been too frequently respired by a number of persons or animals, without being renewed, has been from time immemorial known and admitted to be a fruitful source of impaired general health, and consequently an active individual agent in predisposing to tuberculosis. The influence of cold, often conjoined with moisture, together with overcrowding and insufficient ventilation, the exhalations from the soil, and from the decomposition of animal and vegetable matter, and, especially among the poor, living in damp, cold apartments on the ground floor, insufficiently drained, badly ventilated, and unvisited by the sun's genial rays, are causes which do, and ever must, operate as powerful aids to hereditary predisposition, and favour deficient or improper food in engendering consumption. I deem no apology necessary for my reading to you the views of a recognised and able modern authority on *these* points:—

"Children and young persons, subjected to the causes just mentioned, become delicate or sickly. The vital endowment, and the structural develop-

ment, of the several organs and textures, are impaired or arrested in their progress. Like plants growing, excluded from sun and wind, their vessels often extend rapidly in the direction of their axis; but the parietes of the vessels, and their lateral branches, are thinly or weakly formed, are surrounded by a lax cellular tissue or parenchyma, and both the organic nerves and the animal fibres are imperfectly constituted. The formative processes seem arrested before they are completed. The circulating fluids present a superabundance of the serous and albuminous constituents, and a deficiency of fibrine and of red globules. Whilst the blood is defective in its crasis, the blood-vessels are impaired in their tone; and the venous and lymphatic systems are more manifestly and more prominently developed. This condition of the frame often proceeds from the parent or parents. In many cases it is acquired in early life from various causes, especially from those mentioned, as insufficient or improper food, breathing an impure or self-contaminated air, a cold and humid atmosphere, or dark, cold, and damp apartments, cellars, &c.—the crowding of numbers in ill-ventilated places, and particularly in sleeping apartments, premature sexual indulgences, and solitary vices which waste and exhaust nervous and vital power, and consequently impair the digestion and nutritive processes, at the periods of life when due assimilation and nutrition are most required; and whilst these causes often generate this state of frame they produce, in various parts, textures, and organs, but particularly in the lungs, the deposit of tubercular matter."

The direct effect of other diseases, even local diseases, in favouring the development of tubercle in those who are predisposed, or, in other words, who are of the diathesis, few I believe will deny. In general terms this may be predicated of such as lower vital power, depress nervous energy, and interfere with nutrition. Inflammation, especially of the lung and its various tissues, and those diseases in which lung congestions most frequently occur—as, for instance measles, small-pox, hooping-cough—are notoriously the immediate precursors of tubercular deposits in the lung, and that, too, in individuals in whom, prior to their being subjected to this cause, not even a suspicion of their existence was entertained. These diseases, in my opinion, favour the disposition, in consequence of the pulmonary congestion which they entail; a congested state of the capillary system everywhere favouring exudation or secretion, and in the debilitated, cachectic, scrofulous diathesis thus exuding or secreting tubercle. Some have held that a syphilitic taint in the constitution of individuals favoured the occurrence of phthisis; but, for my part, I have been long inclined to attribute any mischief arising in such cases, rather to the cachexia induced and maintained by the abuse of mercury, to which these unfortunates are often so mercilessly

subjected. Indeed, mercurialization itself appears to me of such potency for evil in the scrofulous habit, that it should be, if possible, religiously avoided.

Particular occupations and social conditions of classes, irrespective of atmospheric influences, of insufficient ventilation, or of impurity of air, are generally admitted, if not to be capable of directly engendering scrofula, at least of producing that cachexia so favourable to its occurrence—diseased or perverted nutrition, in fact, thus entailed, being the *origo mali*. Before leaving this part of our subject, I would briefly allude to a few circumstances which, in my mind, merit consideration. The neglect of out-door exercise, irregularity in the hours of sleeping and waking, that too frequent *fashion* of our better classes of turning night into day, inattention to the healthy functions of the skin, exposure of parts of the body to vicissitudes of temperature, and, despite all that can be said to the contrary, sleeping in too low a range of temperature, appear unquestionably to favour the development of tubercle in the predisposed. Every circumstance that impedes the free action of the muscles of respiration, such as tight lacing, unyielding supports in stays, and the like, should be carefully avoided. Nor should a class of causes be overlooked which it is too much to be feared are of more general and frequent occurrence than is believed. Inordinate indulgence of the passions and affections, depressing moral emotions, anxiety of mind, hope deferred, that "maketh the heart sick," and I must add, the unnatural and debasing vice of self-indulgence, have all no mean influence in the production of tubercle in the lung.

I have thus endeavoured to enumerate those causes which have been, up to the present day, held by our recognised authorities as predisposing to, or actively operative in, the production of consumption. However, very recently, an authority whose experience, deep research, profound erudition, and enthusiastic philanthropy all recognise; whose acquirements, professional and literary, none can respect, none admire more than I do; such an authority has startled us by the proposal, that we are to ignore all we heretofore thought we knew, and that we are to admit but one sole and universally operative cause, to the exclusion of every other. Foul and impure air,

we are told, alone produces tubercle! We have been asked to see in tubercle but the residuum carbon of respiration—the product of chemical, not vital action. The Black-hole of Calcutta was not wanted to prove the necessity of oxygenised air to human existence; but neither that, nor any other less palpable fact, has ever demonstrated tubercle to be the consequence, much less the product, of the residuum carbon of respiration. We are far from denying the part which foul air plays in inducing that impaired health, that constitutional debility which favours tuberculosis. Impure air acting singly, may be productive of the former, but I believe of the latter rarely, if ever, save in combination with other and more active causes.

We now approach not the least difficult or important part of the task we have proposed to ourselves. What is known of the "remediability of consumption?" Let us divide this subject into two heads—its preventibility and its curability. Can phthisis be warded off? or, once established, can it be cured? Now, to answer either question, it must immediately occur to every thinking mind how absolutely necessary it becomes for us to have accurate and well founded information on what has heretofore occupied our attention—namely, its pathology and causation. For, it is clear that, to remove or neutralise the admitted causes of its production, must be the first step towards its prevention: just as accurate knowledge of the origin and progress of the lesions of structure which alone constitute it, must be necessary, *save to empyricism*, to establish rational views of treatment. Can, then, phthisis be prevented? I believe in the possibility, but doubt the probability. If we could remove or obviate the circumstances which we regard as causes, it is but natural to think it possible; but as no reflecting mind can rationally hope to see this fully accomplished, we are forced to hold the opinion of its improbability; for how are we to rescue our species from the influence of those conditions which all admit to be causes? How annihilate that indissoluble link between parent and child? How put a stop to or check the numberless, nameless errors and vicious habits of the immoral and depraved? How correct the follies and weaknesses of the thoughtless and ignorant? How obviate all the ills that beset the thorny path

of the poor, the destitute, the careworn, the heart-broken? How wipe out from our catalogue of diseases those which we all recognise to be active in inducing it—as, for instance, all inflammatory affections of the thoracic organs? How, from the children of affluence and luxury, the heirs of every joy and comfort that this world can afford, shall we avert the "slight cold" which they know not how they caught, but which we know and believe cradled the destroyer? Can we protect the fragile, the delicate, the tender blossoms of our species that "the winds of heaven visit not their face too roughly?" Can we nip in the bud that fatal tendency to favour the development of consumption, which all the eruptive fevers, though perhaps not equally, seem to possess? Or, come it from what source it may, can we hope to "*shovel*" it out by any known agent—ay, even by "pure air always?"

"Naturam expellas *furcâ*, tamenusque recurret."

Prevention, no doubt, *is* better than cure; nor is this truer of any disease than of consumption. Heretofore, medicine has taught, that all we had to hope from our efforts at prevention was to be drawn from the means we possessed to remove or neutralise the causes enumerated. Scientific medicine has admitted also that our success had fallen far short of either our hopes or aspirations. But we have been lately told that to accomplish all we could desire, to make phthisis a thing that was, a mere matter of history, we needed but one agent, but one panacea; and that "*now, indeed, and for ever, it may be set aside*," simply by the respiration of "pure air!" The proposition is a startling one, with many and pleasing recommendations to our pre-conceptions and our tastes. Who of us would not, if he could, gladly embrace the doctrine which offers so simple, so grateful an "antidote" to "cleanse the foul *bosom* of that perilous stuff," yclept tubercle—an antidote which, by its potency, would dispel our doubts; which, by its appeals to our judgment would satisfy our reason, and which, though it unteach us all we had ever learnt, would surely justify us, one and all, in exclaiming

"Throw physic to the dogs, I'll none of it."

And now, as to its curability, I shall be indeed brief, and content myself by merely stating a few general principles;

for, to enter fully into the subject of the treatment of phthisis would be foreign to my object, and at present inopportune. I wish we could expunge from the vocabulary of medicine the word *cure*. The opinion may be heterodox, but I hold it—that physicians *treat*, and Nature *cures* disease. Nor of any morbid condition can this be more truly predicated than of phthisis. Here scientific medicine may aid her, but can do no more; and perhaps it were well for the afflicted if more were not attempted. Whenever the treatment of consumption is under consideration, two points require to be held well in view:—first, do tubercles really exist in the lung of the invalid? and if they do, in what stage of their progress are they? Long experience has satisfied me that an accurate reply to the former query is all-important to a true solution of the vexed question of its remediability; for, is there a pathologist who does not believe and *know*, that a large proportion of those cases that have been vaunted as instances of consumption *cured* (save the mark!) never deserved the designation, but which, from the great similarity, indeed frequent identity, of their symptoms, only simulated phthisis? Tubercles once deposited in the lung, authorities are by no means agreed as to whether they can be removed by absorption; or whether some of their component parts may not be removed, leaving a residuum of earthy salts behind, which does not necessarily entail the too often fatal ulceratiive process; or whether, as others have held, and still do, that the only hope for the consumptive patient was in the formation of a lining membrane around the parietes of the previously ulcerative cavities—a lining, at first more or less of the nature of that membrane to which it is continuous, but soon becoming fibrous, and ultimately cartilaginous. Finally, the cavities either remain so, lined by this fibro-cartilaginous membrane, or their opposite surfaces meet, coalesce, and form those cartilaginous cicatrices in the lung, which, though rare, yet have been sufficiently frequently seen to satisfy most observers of the true nature of their origin being, healed tubercular vomicæ.

Now, if we admit the correctness of these views, we cannot deny the remediability of consumption. In truth, it is now an admitted and recognised fact. But *how*? is the question.

And here I mean to address myself to but a few of the more prominent and more modern ideas prevalent on this topic.

In general terms, it may be said that the two leading indications of *treatment* in phthisis are—1st. The judicious employment of those means that are deemed most effectual in removing or diminishing local irritation, congestion, or inflammation—those circumstances which I have before shown so palpably to favour tubercular deposition; and 2nd. To have recourse to every means that experience and prudence may suggest, to improve and maintain the general health—to ameliorate the impaired functions of digestion and nutrition, in the hope of dispelling cachexia, and establishing a more sthenic and healthful diathesis. The bare enumeration of the various measures that have been advised and adopted, both in and out of the profession, with a view to meet these two indications, would be wearisome and profitless—for if there be a disease in which empyricism and irrationality have exercised their ingenuity more than another, assuredly that disease is consumption. My present object will be sufficiently attained by a brief notice of a few of those means most esteemed and employed by our profession. Medicine knows no *specific* for consumption; though in our own times we have heard of several vaunted as such; and what is strange, some of them of a nature opposed to every principle on which a rational treatment of the disease could be founded. These, and their name is legion, I shall entirely omit, and trouble you with but a few remarks on matters of real value and interest, premising that all the resources of our art, all the sound judgment and scientific research of the physician are never more severely taxed than in the general treatment of consumption. We have been told lately that nothing more is now known of this disease and its treatment than was in the days of Withering and Beddoes, and statistics have been absurdly, in my mind, appealed to as proof of this assertion. Why neither of these worthies actually knew what phthisis was; much less did they know the means of determining its presence or its absence. In lauding the sovereign powers of—what think you?—digitalis!—Beddoes writes thus:—"If I specify that it has succeeded in three cases out of five, I believe I much underrate the proportion of favourable events."

Three cases in five of consumption *cured* by digitalis!! Verily I think we *do* know more of phthisis in our day, and of its treatment too, than did Dr. Beddoes.

The regimen of patients threatened with, or labouring under phthisis is all-important to attend to. Nor are authorities at all agreed upon the matter—some recommending animal and generous diet; others insisting on a low, or at most a milk and farinacious diet. Now, the error seems to me to be in laying down any fixed rule; for assuredly such will never be universally applicable. Each patient's circumstances, the amount of disease present, his habit of body, his powers of constitution, and, above all, of digestion and assimilation, must influence us in adapting to him that diet which will afford to impaired digestive powers the greatest amount of nourishment. This should be our only guide—this our golden rule. For let us ever remember, here as indeed everywhere, that all food, to be nutritious, must be suited to the digestive powers of the stomach that receives it, else it not only fails to nourish but acts as a direct irritant. Hence it is that one patient will improve more on a strong animal diet, another on milder, less stimulating food. As we have seen that its very origin and advance were intimately connected with disease of an acute or inflammatory nature, we are justified in assuming that in such cases the least stimulating diet should be indulged in; whereas, under opposite circumstances a more generous dietary may be allowed. I need not dwell on the comparative value of individual objects of food—this were no easy task; but I would hazard a remark or two on the importance of one which of late has engaged a good deal of public attention. Others may and do look upon it simply as a therapeutic agent, but I own I cannot satisfy myself that it may not be justly viewed as suitable and easily digested nourishment. I mean *cod liver oil.* Beyond what I have already hinted, it is not my purpose to consider its *modus operandi;* but to its beneficial effects in correcting the tubercular diathesis—in apparently checking the progress of already depositing tubercle—in aiding Nature in the efforts she may make for their removal and cicatrization, I believe a willing testimony will be borne by the great body of the profession, to whose almost uni-

versal experience, however, I feel bound to quote the following remarkable exception:—

"Exercise, sufficiently prolonged in the free, open air, with its respiration at all times and in all places, will necessarily and assuredly, *in every case*, avert consumption. This is more than can be said, in a single instance, of the 70 or 80 tons of cod-fish or other fish-oil yearly consumed in England, or the 600 gallons of the same ineffective substance annually made use of in the Brompton Hospital. Indeed, all the cod-fish in the ocean, were they converted into oil, would not relieve or avert a single instance of consumption."

From these views I, with regret, must record my unqualified dissent. They are opposed to the opinions of the profession; and for myself, I am conscious of the daily occurrence of facts sufficiently numerous and palpable to chase from my mind any hesitation or scepticism that might have preoccupied it. In connexion with this subject, it has not escaped notice and is worthy of remark, that tribes of men, a large proportion of whose food consists of fish, fish oil, and other fatty matters, are known rarely to be affected by tuberculosis. Moreover, that amongst ourselves such persons as are exposed to greasy inunction of the surface, as butchers, chandlers, workers in woollen factories, and the like, would seem to acquire, to some extent, an analogous immunity. Nor has the idea of inunction of the surface, as a therapeutic mean, been overlooked by the profession; but, on the contrary, is now rather extensively practised. It is not held that the oil of the Asellus alone possesses the valuable properties attributed to it. There is good reason to think that oil obtained from other animal sources may not be devoid of efficacy. It is more than suspected that the livers of other fish than the cod are used to furnish the required amount of medicinal oil, and I may state that I happen to know, that a very large quantity of oil from the livers of *sharks* has been saved lately in our Indian waters, especially along the Malabar coast, which no doubt will find its way into our markets.

Take what view, however, we may, of the manner in which the fish-oil acts on the human economy, I believe there will be but few of our profession so hardy as to deny its marked efficacy in the treatment of all forms of scrofulous disease, and its valuable properties as an active agent in correcting the tubercular diathesis.

From the various forms of counter-irritation and of inhalation, if not by the profession, at least by the public, much has been expected. Witness our St. John Longs, "*et hoc genus omne.*" This, indeed, has been the field most and best cultivated by charlatanry and empyricism. Here the golden harvest has been gathered by *their* busy labourers—alike ignorant and careless—that foremost amongst them—

> "There is a reaper whose name is—*Death*!
> And with his sickle keen
> He reaps the bearded grain *at a breath*,
> And the flowers that grow between."

The confidence by some reposed in counter-irritation would justify the inference that morbid products might be extracted from the body by their means, as iron follows the magnet. Has not a scion of nobility sworn, in open court, that he *saw* St. John Long extract pure fluid mercury from a patient, by means of his far-famed liniment? Nor has the faith of others in the value of inhalations, though perhaps the more prevalent and received idea, been better based on truth, or verified by practical results. Laennec, in referring to such means, condemns them in words to this effect :—"Boast has been made, in their turn, of acids and alkalies—of strict low diet, and of an animal and generous diet—of pure air and of air charged with fœtid vapours, with oxygen, hydrogen, and carbonic acid—of active exercise and of quiet—of demulcents and of tonics—heat and cold—paregoric and other anodynes, and of stimulants, not only of an aromatic and anti-scorbutic nature, but even the most irritating preparations of mercury, sulphate of copper, orpiment and arsenic." Nor are these more than a sample of the mass of contradictions and absurdities that have found advocates and dupes. It will not be denied that, in the hands of the judicious and scientific practitioner, as means to certain ends, counter-irritation does and will prove a valuable adjunct to other treatment. To expect more from it is but to court disappointment.

Few subjects have more engaged the attention as well of the public as of our profession, than the importance of climate in consumption; though I think I may assert, that since the real nature of the malady has been better understood, the sanguine hopes reposed in climate as a remedial agent

in phthisis have greatly abated. We are inclined to view it now rather as a preventive than a remedy. We look to it as a means of improving the constitution and correcting the diathesis. A residence in a mild and dry climate also renders attacks of catarrh and other congestive affections of the lung less frequent, thus averting a certain amount of mischief and danger. Some go much further in their faith in its powers, and hold that perfect recovery from every stage of confirmed phthisis may be attributed to it alone. This opinion will, in our times, find few advocates. That practice, which I cannot but characterise as absurd as it is cruel, of sending abroad in search of a warmer climate the confirmed phthisical patient, is now happily falling into disuse. As a means of re-establishing impaired health—of even eradicating tubercular cachexia and renovating an impaired constitution before as yet actual local disease is established—few can hold its efficacy in higher estimation than I do; but I would enter a solemn protest against that indiscriminate expatriation of so many of our fellow-countrymen to climes not a jot better suited to their actual maladies than our own. I would not be thought to desire to undervalue the importance of a dry soil, with a moderately warm and dry atmosphere, to the patient threatened with, or actually in the earlier stages of, phthisis. But even by such I fear these advantages are purchased at far too dear a price. Whilst to the confirmed consumptive no equivalent can be rationally promised for parting from friends and home, and everything that makes home sweet; changing its comforts and luxury, its peace and quiet, for the bustle and disagreeables, the discomfort and endless inconveniences of travel—and all, too frequently, alas! for what?—to die, far removed from every tie, animate and inanimate, that bound him to earth—"a stranger in a strange land!" Yet I shall be told—See how many return. 'Twere instructive to inquire what proportion of those who are sent abroad have really had consumption: then what proportion of these consumptives return cured, or even improved. I apprehend they would be found "*rari nantes in gurgite vasto.*" In such cases as a change of climate may be thought advisable, I hold that, all things considered, our own islands, along their southern coasts, present to the invalid spots as attractive and

beneficial as those more remote regions so often sought with hopeful confidence as a panacea for every ill, a cure for every malady, and, when reached, too often found to be the wanderer's tomb.

Exercise, either in a carriage, on horseback, or afoot, has been much and universally recommended; and where patients are in circumstances which admit of their being indulged in, should not be omitted. Still it should never be forgotten that exposure to vicissitudes of temperature are to be carefully guarded against. Both the barometer and thermometer should rule the open-air exercise of the consumptive, equability of temperature and dryness being the grand desideratum. The value and importance of the pure, fresh breeze of heaven to the consumptive or other invalid, who will question? but all admit that where possible, and by every means in our power, its temperature should be regulated. Even the uncompromising advocate of "an open-air life," as our sole palladium against and remedy for tubercle, himself recommends "a temperature in winter of *not* less than 60° Faht.," adding, in the very next sentence, this (to me) inexplicable paradox—"at night this is not necessary, even during the coldest weather." The importance to the invalid of inhabiting a chamber whose ventilation is as perfect as may be, and whose temperature is steadily and regularly maintained, as well by artificial means as by the free admission of the genial and ever health-freighted rays of the sun, cannot be overrated or too frequently insisted on.

We are told by the authority already quoted—"However indifferent or unsubstantial the nourishment, whatever be the absence of cleanliness, the sufficiency or insufficiency of clothing, the climate, the amount of exercise, of sleeping or waking; if the abode be one in which the atmosphere is readily renewed, if the sun's rays play directly, if the house be airy, well lighted and duly proportioned to the number of occupants, scrofula *will never visit it.*" Again, we are told that "phthisis is absolutely within our own control;" that "no one need become consumptive who does not choose it;" that "it may be henceforth and for ever set aside." Again, that it "is not only, when taken early, often removable, but what is of still greater importance, that, with

proper means and appliances, it is in *every single instance* preventible!" Well, I shall only say, and I say it in all sincerity, if so, it were "a consummation devoutly to be wished."

Finally, then, gentlemen, for I much fear that I have well nigh exhausted your patience, although I have, of necessity, very superficially and imperfectly treated this obscure and difficult subject; to the questions proposed for our consideration, I would reply thus :—

1st—Consumption is the deposition and development of tubercle in the lung. This one morbid secretion into the lung's tissues, proceeding through its different stages, constitutes phthisis, and nothing else does.

2nd—The causes of this perverted secretion reside in a predisposition, either *innate* or hereditary, usually accompanied by the well-known tubercular constitution; or, they are *acquired*, resulting from an impoverishment of the blood, and reduction of vital power.

3rd—Consumption *is* remediable, both by prevention and treatment. But we are forced to admit that the difficulties and obstacles which meet and oppose our best directed efforts in aid of Nature are too often of such magnitude and extent as to disappoint our hopes and frustrate our endeavours. With too much truth has consumption been designated the opprobrium of Medicine. She cannot, neither does she, vaunt herself on her unreal successes; but, conscious that she has yet much to learn, she continues to observe; she records facts, and on them she founds theories; both, she hails, when they are put before her, with grateful pleasure; but, come from what quarter they may, closely must she sift them, and carefully separate the gold from the dross. What she has adopted and generally received as genuine on the subject of consumption I have endeavoured to lay before you this evening, and, gentlemen,—

"Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum."

PRINTED AT "THE BELFAST DAILY MERCURY" OFFICE.